IN THE SPECIFICATION

Please amend the specification as follows:

Please amend the paragraph beginning on page 4, line 17 as follows:

A DSL Modem for performing the above described method is also provided. The DSL modem comprises a DSL circuit that communicates data along an analog telephone line, and a relay for switching a connection between (i) the DSL circuit and a first pair of [[lines]] wires of the analog telephone line, and (ii) the DSL circuit and a second pair of [[lines]] wires of the analog telephone line. The DSL modem also includes a memory containing instructions for undertaking the above described method for automatically configuring a DSL modem.

Please amend the paragraph beginning on page 6, line 9 as follows:

The copper twisted pair[[s]] 118 leaving a home or business connect to a telephone company's central office 104, currently, up to 18,000 feet away. A DSL modem 102, located at the telephone company's central office 104 includes a POTS splitter, which separates voice calls 132 from the data 134. Voice calls 132 are routed to the telephone company's public switched telephone network (PSTN) 106 and thereafter are switched to their destination 110. Data coming from a computer 130, in the home or office, passes through a transmitting DSL modem 128, through a receiving DSL modem 102 at the telephone company's central office 104, and to a digital subscriber line access multiplexer (DSLAM) 108. The DSLAM 108 links many DSL lines to a single high-speed asynchronous transfer mode (ATM) network 112, which in turn connects to the Internet 116 at speeds up to 1 Gbps. (ATM is a dedicated-connection switching technology that organizes digital data into 53-byte cells or packets and transmits them over a medium using digital signal technology.) In a converse manner, data requested by the computer 130 is retrieved from the Internet 116 and routed back through the DSLAM 108 and DSL modem 102 at the telephone company's central office 104 before arriving at the home or office.

Please amend the paragraph beginning on page 6, line 25 as follows:

POTS devices 120, such as standard telephone sets, are also connected to a twisted pair 118. However, to split analog voice communication from digital data, μfilters 122 must be placed between each POTS device 120 and the twisted pair 118. Voice travels on the first 4kHz of frequency, while the higher frequencies, up to 2MHz depending on line conditions and wire thickness, are used for data. It should be appreciated, that although only one twisted pair 118 is shown, typically, two twisted pairs of copper wires are available in most homes and/or offices, as shown in FIG. [[3]] 2.

Please amend the paragraph beginning on page 7, line 9 as follows:

FIG. 2 is a diagrammatic perspective view of the DSL modem 128 shown in **FIG. 1**. The DSL modem 128 connects to a standard analog phone line 216 ~~, or 118~~ (**FIG. 1**). The DSL modem 128 preferably comprises at least one data processor or central processing unit (CPU) 200, a memory 202, a DSL circuit 204 that communicates data along the analog telephone line 216, a relay 210, output ports 208, and at least one bus 206 that interconnects most of these components.

Please amend the paragraph beginning on page 7 line 15 as follows:

The analog line 216 typically consists of two twisted pairs of copper wire. An inner pair [[212]] 118A, which is usually red and green in color, and an outer pair [[214]] 118B, which is usually yellow and black in color. The analog line 216 communicates voice and data from the telephone company's central office 104 (**FIG. 1**) to the DSL modem 128. Both the inner 118A and the outer 118B pairs connect to a relay 210 which is configured to connect either of the twisted pairs [[212]] 118A and [[214]] 118B to the DSL circuit 204. The DSL circuit 204, in turn, communicates the data to the computer 130 (FIG. 1) via output ports 208.

Please amend the paragraph beginning on page 8, line 4 as follows:

The instructions 308 for determining available communication resources on the analog telephone line preferably further comprise instructions for automatically detecting 310 if a DSL communication circuit exists on the analog telephone line [[316]] 216 (**FIG. 2**). A DSL communication circuit exists where a DSL "dial-tone" exists, i.e., where a communication circuit capable of communicating data via a DSL modem is present on the analog line[[s]]. The instructions for automatically detecting 310 if a DSL communication circuit exists further comprise: instructions for establishing 312 a first connection between a first pair of [[lines]] wires (preferably either the inner or the outer twisted pair [[312]] 118A or [[316]] 118B (**FIG. 2**)) of the analog telephone line 216 and the DSL modem 128; instructions for ascertaining 314 whether a DSL communication circuit exists on the first connection; instructions for generating 316 a second connection between a second pair of lines (preferably the other of either the inner or the outer twisted pair [[312]] 118A or 316 118B (**FIG. 2**)) of the analog telephone line 216 and the DSL modem 128; instructions for testing 318 whether a DSL communication circuit exists on the second connection; and instructions for storing 320 results of the ascertaining and testing steps as at least part of the available communication resources. The instructions for establishing 312 and generating 316 may further comprise instructions for switching the relay 210 (**FIG. 2**) between the first and the second connections.

Please amend the paragraph beginning on page 10, line 13 as follows:

To automatically ascertain if a circuit capable of communicating DSL signals is available, the determining step (step 404) preferably further comprises automatically detecting (step 408), using instructions 310 (**FIG. 3**), if a DSL communication circuit exists on the analog telephone line 216. That is, it is determined whether a DSL "dial-tone" is present on the analog line 216. This can be done as follows. A first connection is established (step 410), using instructions 312 (**FIG. 3**), between a first pair of [[lines]] wires of the analog telephone line 216 and the DSL modem 128. Afterwards, it is ascertained (step 412), using instructions 314 (**FIG. 3**), whether a DSL communication circuit exists on the first connection. The first pair of [[lines]] wires is preferably

either the inner twisted pair 118A or the outer twisted pair 118B, of double twisted pairs of an analog telephone line 216. In configurations where more than two twisted pairs are bundled together, connection to any first twisted pair can be established.

Please amend the paragraph beginning on page 10, line 25 as follows:

A second connection is then generated (step 414), using instructions 316 (FIG. 3), between a second pair of [[lines]] wires of the analog telephone line 216 and the DSL modem 128. This second pair of [[lines]] wires could be any other twisted pair, other than the twisted pair selected as a first pair of [[lines]] wires. Preferably the second pair of [[lines]] wires is the other twisted pair, either inner 118A or outer 118B, not selected as the first pair of [[lines]] wires. Testing (step 416), using instructions 318 (FIG. 3), then occurs to see whether a DSL communication circuit exists on the second connection. The establishing (step 410) and generating (step 414) steps preferably occur by switching between the first and the second connections using the relay 210 (FIG. 2), Which is configured to be responsive to CPU 200. Once it is established whether a DSL communication circuit exists on either, both, or neither pairs of [[lines]] wires 118, the results of the ascertaining and testing steps are stored (step 418), using instructions 320 (FIG. 3), as at least part of the available communication resources 340 (FIG. 3). These communication resources are then used to automatically configure (step 406) the DSL modem 128, i.e., the DSL modem 128 will only communicate on [[lines]] wires 118 that are capable of transmitting and receiving DSL data thereon.

Please amend the paragraph beginning on page 11, line 10 as follows:

To automatically configure the DSL modem 128 for a virtual communication route that is confirmed to be working, the determining step (step 404) preferably further comprises automatically identifying (step 420), using instructions 322 (FIG. 3), a virtual communication route for communications between the DSL modem 128 and a communications network.

Please amend the paragraph beginning on page 11, line 15 as follows:

The DSL modem 128 is either shipped, or later upgraded, preferably remotely, with code that includes a static list of VPINCI pairs. This static list of VPINCI pairs is determined by the list of VIPNCI pairs that a local DSLAM can be configured with.

Please amend the paragraph beginning on page 11, line 118 as follows:

The Identifying step (step 420) further comprises a number of steps. A plurality of test signals are transmitted (step 422), using instructions 326 (FIG. 3), to the communication network. A response signal is received (step 424), using instructions 330 (FIG. 3), to one of the plurality of test signals from the communication network. The response signal is then stored (step 426), using instructions 336 (FIG. 3), as at least part of the available communication resources. These communication resources are then used to automatically configure (step 406) the DSL modem 128, i.e., the DSL modem 128 will only communicate using the virtual communication route received (step 424).

Please amend the paragraph beginning on page 12, line 3 as follows:

Likewise, the receiving step (step 424) further comprises the step of acquiring a single response cell back from the A TM network, where the single response cell contains a single response VPINCI pair for communicating with the ATM network. This means that the first packet received by the DSL modem 128 will contain a working VPINCI pair.